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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,203	07/08/2003	Kaoru Matsuki	116454	6342
25944	7590	01/23/2006		
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER LARKIN, DANIEL SEAN	
			ART UNIT	PAPER NUMBER
			2856	

DATE MAILED: 01/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/614,203	MATSUKI ET AL.	
	Examiner	Art Unit	
	Daniel S. Larkin	2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 10-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8 and 9 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>13 July 2005</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicants' election with traverse of Group I, claims 1-9, in the reply filed on 7 November 2005 is acknowledged. The traversal is on the ground(s) that the restriction fails to show 2-way distinctness between the groupings and that the reasons for insisting on restriction have not been provided. This is not found persuasive because first, 2-way distinctness was in fact shown. The apparatus claims of Group I, claims 1-8, expressly recite the use of a profile processor, which is not required by the invention representing Group II, claim 10. Claim 10, on the other hand, recites a reference position signal value calculator, which is not required of the invention of claim 1, Group I, and which was also cited in the grounds for restriction. Thus, each claim, claim 1 of Group I and claim 10 of Group II, recite a limitation which is not found in the other claim.

With respect to the perceived lack of showing of 2-way distinctness between Group I and Group III, claim 11, representing Group III, recites a profile processor which performs additional functions than those recited in claim 1 of Group I. Claim 1, on the other hand, recites a response variation factor calculator, which is not required by the invention of Group III. These features were pointed out in paragraph 4 of the restriction requirement.

With respect to the perceived lack of showing of 2-way distinctness between Group II and Group III, claim 11, representing Group III, recites a profile processor which is not required of the invention claimed in Group II. Claim 10, on the other hand,

Art Unit: 2856

recites a reference position signal value calculator, which is not required of the invention of Group III.

With respect to the argument that the reasons for insisting on restriction were not provided, the examiner respectfully disagrees. First, the examiner cited the fact that the field of search was different for each grouping. Second, just because all the groupings fall into 73/105 does not mean that the fields of search are not different. Class 73/105 is a broad subclass whereby all roughness measurements are classified. These include atomic force microscopes, profilometers, and asperity testing on magnetic disks to name but a few of the different technologies present in 73/105. Given that Group II requires a reference position signal value calculator that is not required of Group I or II, searching for this feature would create an additional burden for the examiner, if Group II were to be searched in combination with Group I. Additionally, Group III requires the additional limitations of the profile processor, which is not required by the invention of Group I, and therefore, would also create an additional burden for the examiner to search those limitations in combination with the limitations provided for in Group I.

With respect to applicants' argument that the examiner has insisted on a restriction requirement between AB_{sp} and B_{sp} , the examiner respectfully disagrees. The restriction requirement was between combination (AB_{br}) and subcombination (B_{sp}), not as applicants have argued. In each comparison between the groupings, one limitation is present that is not present in the respective comparative grouping. This is the basis for the restriction. Applicants are encouraged to review the arguments cited above.

With respect to the applicants' argument that the examiner must examine the entire application, even though it includes claims to independent or distinct invention, if it can be made without serious burden, the examiner maintains his position that a serious burden is created. The examiner in searching for the limitations of Group I is formulating a strategy for searching this invention/combination. To ask the examiner to search along a different path would create a burden for the examiner. Again, with respect to the arguments provided above, just because the claims are all classified in the same class does not suggest that the search ends there. Some limitations present in one grouping may require searching in an area that is unnecessary to another grouping; and these situations create a burden for the examiner. The requirement is still deemed proper and is therefore made FINAL.

2. Claims 10-12 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 07 November 2005.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

4. The drawings are objected to because of the following:

Reference box "4", as shown in Figure 14, should also be labeled -- controller --.

Reference box "27", as shown in Figure 15, should also be labeled

-- vibration detector --.

Figures 20A and 20B do not exist contrary to the disclosure of page 3, lines 5-32 through page 4, lines 1-7.

Reference boxes "26" and "29", as shown in Figure 1, should also be labeled -- vibrating circuit -- and -- detection circuit --, respectively, in order to more easily identify the invention without having to read through the specification.

Reference boxes "41", "42", "43", "44", "45", "46", and "47", as shown in Figures 1 and , should also be labeled -- storing circuit --, -- difference detector --, -- movement vector generator --, -- corrections vector generator --, -- movement controller --, -- memory --, and -- processor --, respectively.

Reference boxes "46", "48", "50", "51", "52", and "53", as shown in Figure 2, should also be labeled -- memory --, -- profile vector generator --, -- profile angle calculator --, -- vibration inclination angle calculator --, -- table --, and -- profile processor --, respectively.

Reference boxes "29", "42", "43", "44", "45", "46", "48", "50", "51", "55", and "56", as shown in Figure 9, should also be labeled -- detection circuit --, -- difference detector --, -- movement vector generator --, -- corrections vector generator --, -- movement controller --, -- memory --,

-- profile vector generator --, -- profile angle calculator --,
-- vibration inclination angle calculator --, -- table --, and -- profile processor --,
respectively.

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

Reference numeral -- 2 -- does not appear within Figure 15, as suggested by the disclosure on page 1, line 23.

6. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

Reference numeral -- 24 --, as shown in Figure 15, does not appear within the specification relating to Figure 15.

The "YES" and "NO" conditions relating to Step ST207, as shown in Figure 7, are not described within the specification.

Reference characters "H" and "G", as shown in Figure 8, do not appear within the specification.

Reference designation -- ST53 --, as shown in Figure 11, does not appear within the specification.

The “YES” and “NO” conditions relating to Step ST53, or the step itself, as shown in Figure 11, are not described within the specification.

7. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

8. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

9. The disclosure is objected to because of the following informalities:

Page 3, line 15: The first occurrence of the article "the" should be deleted.

Page 3, line 29: The second occurrence of the article "the" should be deleted.

Page 6, lines 12 and 21: The term "Gap" should be corrected to read -- gap --.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-6, 8, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 858015 (Ogihara et al.).

With respect to the limitations of claims 1 and 9, the reference to Ogihara et al. discloses a surface profile apparatus and method for operating a surface profile apparatus, comprising the steps of providing a trigger probe (70) having a stylus with a

Art Unit: 2856

measuring portion (14A) and a detector (30); providing a scanning mechanism for moving the measuring portion (14A) along the surface of a workpiece (W); providing a sampling unit (32) that samples position information; providing a response variation factor calculator (50); and providing a profile processor (102) to obtain a profile of the workpiece (W).

With respect to the limitations of claim 2, the reference to Ogihara et al. discloses that that the variation factor is a deviation between a measuring point when the detection signal reaches the reference signal value and a standard measuring point of the measuring portion, and wherein the profile processor includes a correction amount deriving unit that species a correction amount of the position information by the response variation factor.

With respect to the limitation of claim 3, the reference to Ogihara et al. discloses that a table, see Figure 6 and 7, storing a relationship between a correction amount and the variation factor.

With respect to the limitation of claim 4, the reference to Ogihara et al. discloses that the correction amount deriving unit is a correction amount calculating formula, see page 7, lines 41-56 though page 9, lines 1-35, that calculates the correction amount based on the response variation factor.

With respect to the limitation of claim 5, the reference to Ogihara et al. discloses that the deviation is calculated on the basis of a profile vector correcting a first position information of the measuring portion when the detection signal reaches the reference

signal value and a second position information of the measuring portion when the detection signal previously reached the reference position signal value.

With respect to the limitation of claim 6, the reference to Ogihara et al. discloses that the contact probe is a vibration type touch trigger probe.

With respect to the limitation of claim 8, the reference to Ogihara et al. discloses that vibration direction of the contact portion of the probe is aligned with the axial direction of the stylus, and the scanning mechanism moves the measuring portion in the X-, Y-, and Z-directions.

12. Claims 1, 2, 4, 6, 8, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by US 6,307,084 (Matsuki et al.).

With respect to the limitations of claim 1, the reference to Matsuki et al. discloses a contact location detecting mechanism of a touch signal probe and a method of measuring a surface profile of a workpiece, comprising the steps of: providing a probe having a stylus provided with a measuring portion (102A) and a detector for outputting a detection signal which varies depending on a measurement condition between the surface of the workpiece and the measuring portion; providing a scanning mechanism (31) for relatively moving the measuring portion along the surface of the workpiece; providing a sampling unit that samples position information of the measuring portion when the detection signal reaches a predetermined reference signal value, col. 7, lines 50-58; providing a response variation factor calculator/correcting signal generator (90) for calculating a response variation factor that applies variation to a response of the

detection signal from the surface of the workpiece; and providing a profile processor that corrects the position information to obtain an actual profile of the surface of the workpiece.

With respect to the limitations of claim 2, the reference to Matsuki et al. discloses wherein the response variation factor is a deviation between a measuring point on the surface of the workpiece when the detection signal reaches the reference signal value and a standard measuring point of the measuring portion, and wherein the profile processor includes a correction amount deriving unit that specifies a correction amount of the position information by the response variation factor, col. 7, lines 50-58 and col. 8, lines 17-59.

With respect to the limitations of claim 4, the reference to Matsuki et al. discloses a correction amount calculating formula that calculates the correction amount based on the response variation factor. Some type of formulation is provided within the corrective signal generator.

With respect to the limitations of claim 6, the reference to Matsuki et al. discloses means for vibrating the probe (103A) and means for detecting the vibration (103B).

With respect to the limitations of claim 8, the reference to Matsuki et al. discloses that the vibration direction of the contact portion is aligned with the axial direction of the stylus, and the scanning mechanism moves the measuring portion within a plane including the axis of the stylus.

Allowable Subject Matter

13. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Larkin whose telephone number is 571-272-2198. The examiner can normally be reached on 8:00 AM - 5:00 PM Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on 571-272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel Larkin
AU 2856
19 January 2006


DANIEL S. LARKIN
PRIMARY EXAMINER